

We Claim:

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1. A method of manufacture of a substantially continuous circumferential coating on a non-planar substrate, said method comprising the step of:  
5 utilising a substantially non directional gaseous deposition technique and a substantially static substrate deposition geometry to deposit said coating.
  2. A method as claimed in claim 1 wherein the coating has piezo-electric modulation ~~characteristics~~ *characteristics*.
  3. A method as claimed in claim 1 or 2 wherein the coating has electro-optic modulation characteristics.
  4. A method as claimed in any one of the preceding claims wherein the coating has semiconducting properties.
  - 15 5. A method as claimed in any preceedinng claims wherein the coating comprises substantially Zinc-Oxide.
  - Sub 7  
Sub 7  
6. A method as claimed in any one of the preceding claims wherein the non directional deposition technique comprises chemical vapour deposition.
  7. A method as claimed in claim 6 wherein the non directional deposition technique comprises single source chemical vapour deposition.
  8. A method as claimed in any one of the preceding claims wherein the non-planar substrate is an optical ~~fibre~~ *fiber*.
  - 25 9. A method as claimed in claim 8 wherein at least one end of the optical ~~fibre~~ *fiber* is clamped onto a substantially planar heating surface during the deposition.
  10. ~~fibre~~ *fiber* A method as claimed in claim 8 wherein the optical ~~fibre~~ *fiber* is clamped at a portion of the length of the  
30 fibre which is located at one end of a heating surface during the deposition.
  11. A method as claimed in claim 8 wherein a movement of a free end of the optical ~~fibre~~ *fiber* is limited to movement substantially along the axis of the optical fibre.
  - 35 12. A receptacle for an optical fibre arranged to be used in a method of manufacture of a circumferential

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coating on an optical fibre utilising a substantially non directional deposition technique and a substantially static substrate deposition geometry, said receptacle comprising:

- a substantially planar heating surface;
- 5 a clamping means for clamping the substrate fibre onto the heating surface, wherein the clamping means is arranged to clamp the fibre at a portion of the length of the optical fibre which is located at one end of the heating surface during the manufacture of the coating; and
- 10 means for limiting a movement of a free end of the optical fibre to movement substantially along axis of the optical fibre.

13. An acusto-optical phase modulator having a phase modulation efficiency greater than substantially 0.25  
15 rad/ $\sqrt{\text{FMW/cm}}$ .

14. An acusto-optical phase modulator having a substantially linear relationship between phase modulation and driving power for driving powers greater than 36mW.

15. An acusto-optical phase modulator ~~as claimed in~~  
20 ~~claim 13 or claim 14 including a piezo-electric modulator~~  
~~having a zinc oxide layer constructed substantially in~~  
~~accordance with the method of any of claims 1 to 11.~~

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B2  
add  
B3